

I. CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A computer-implemented method for resolving prerequisites for client devices in an Open Service Gateway Initiative (OSGi) framework, comprising:

determining, on a server, prerequisites for an OSGi bundle to be loaded on a client device, the prerequisites comprising a set of all OSGi bundles that are necessary for utilizing the OSGi bundle;

communicating, prior to communicating any of the OSGi bundles to the client device, a list of the prerequisites from the server to the client device;

receiving a response from the client device, wherein the response identifies any resource limitations of the client device determined by the client device based on a comparison of the list of the prerequisites and current OSGi package and service interface resources of the client device, the resource limitations comprising all prerequisites of the list of the prerequisites that are not currently present on the client device;

automatically recursively resolving, upon determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and service interface resources than the current OSGi package and service interface resources of the client device, the prerequisites by identifying a final set of OSGi bundles on the server that fulfills the prerequisites within the resource limitations of the client device; and

substituting, upon determining that the list of the prerequisites that are not currently present on the client device would require more client device OSGi package and service interface

resources than the current OSGi package and service interface resources of the client device, at least one other OSGi bundle that operates within the resource limitations of the client device for one of the OSGi bundles and one of the prerequisites of the list of the prerequisites that are not currently present on the client device.

2. (Cancelled)

3. (Original) The method of claim 1, further comprising loading the final set of OSGi bundles on the client device if the prerequisites are completely resolved.

4. (Original) The method of claim 3, wherein the loading comprises the server instructing the client device to load the final set of OSGi bundles in a particular order.

5. (Previously Presented) The method of claim 1, wherein the prerequisites comprise at least one item selected from a group consisting of a service, a package and a computer resource needed by client device.

6. (Original) The method of claim 1, further comprising caching information derived from the response on the server.

7. (Original) The method of claim 1, wherein the method is applied in the presence of a low bandwidth or high cost connection between the server and the client device.
8. (Original) The method of claim 1, wherein the final set of OSGi bundles include OSGi bundles that are identified from a repository accessed by the server.
9. (Original) The method of claim 1, further comprising:
 - receiving the prerequisites on the client device;
 - determining whether the client device has the prerequisites, wherein any of the prerequisites that the client device does not have represent the resource limitations; and
 - sending the response to the server, wherein the response includes the resource limitations.
10. (Currently Amended) A computer-implemented method for recursively resolving prerequisites for client devices in an Open Service Gateway Initiative (OSGi) framework, comprising:
 - determining, on a server, prerequisites for an OSGi bundle to be loaded on a client device, the prerequisites comprising a set of all OSGi bundles that are necessary for utilizing the OSGi bundle;
 - communicating, prior to communicating any of the OSGi bundles to the client device, a list of the prerequisites from the server to the client device;

receiving a response from the client device, wherein the response identifies any resource limitations of the client device determined by the client device based on a comparison of the list of the prerequisites and current OSGi package and service interface resources of the client device, the resource limitations comprising all prerequisites of the list of the prerequisites that are not currently present on the client device;

caching information derived from the response on the server;

automatically recursively resolving, upon determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and service interface resources than the current OSGi package and service interface resources of the client device, the prerequisites by recursively identifying a final set of OSGi bundles on the server that fulfills the prerequisites within the resource limitations of the client device; and

substituting, upon determining that the list of the prerequisites that are not currently present on the client device would require more client device OSGi package and service interface resources than the current OSGi package and service interface resources of the client device, at least one other OSGi bundle that operates within the resource limitations of the client device for one of the OSGi bundles and one of the prerequisites of the list of the prerequisites that are not currently present on the client device.

11. (Previously Presented) The method of claim 10, further comprising loading the final set of OSGi bundles on the client device if the prerequisites are completely resolved.

12. (Original) The method of claim 11, wherein the loading comprises the server instructing the client device to load the final set of OSGi bundles in a particular order.

13. (Previously Presented) The method of claim 10, wherein the prerequisites comprise at least one item selected from a group consisting of a service, a package and a computer resource needed by client device.

14. (Original) The method of claim 10, wherein the method is applied in the presence of a low bandwidth or high cost connection between the server and the client device.

15. (Original) The method of claim 10, further comprising:
receiving the prerequisites on the client device;
determining whether the client device has the prerequisites, wherein any of the prerequisites that the client device does not have represent the resource limitations; and
sending the response to the server, wherein the response includes the resource limitations.

16. (Currently Amended) A computerized system for resolving prerequisites for client devices in an Open Service Gateway Initiative (OSGi) framework, comprising:

a prerequisite computation system for determining, on a server, prerequisites for an OSGi bundle to be loaded on a client device, the prerequisites comprising a set of all OSGi bundles that are necessary for utilizing the OSGi bundle;

a communication system for communicating, prior to communicating any of the OSGi bundles to the client device, a list of the prerequisites from the server to the client device, and for receiving a response from the client device, wherein the response identifies any resource limitations of the client device determined by the client device based on a comparison of the list of the prerequisites and current OSGi package and service interface resources of the client device, the resource limitations comprising all prerequisites of the list of the prerequisites that are not currently present on the client device; and

a prerequisite resolution system for:

automatically recursively resolving, upon determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and service interface resources than the current OSGi package and service interface resources of the client device, the prerequisites by identifying a final set of OSGi bundles on the server that fulfills the prerequisites within the resource limitations of the client device; and

substituting, upon determining that the list of the prerequisites that are not currently present on the client device would require more client device OSGi package and service interface resources than the current OSGi package and service interface resources of the client device, at least one other OSGi bundle that operates within the

resource limitations of the client device for one of the OSGi bundles and one of the prerequisites of the list of the prerequisites that are not currently present on the client device.

17. (Cancelled)

18. (Original) The system of claim 16, further comprising a bundle loading system for loading the final set of OSGi bundles on the client device if the prerequisites are completely resolved.

19. (Original) The system of claim 18, wherein the bundle loading system comprises an instruction passing system for instructing the client device to load the final set of OSGi bundles in a particular order.

20. (Previously Presented) The system of claim 16, wherein the prerequisites comprise at least one item selected from a group consisting of a service, a package and a computer resource needed by client device.

21. (Original) The system of claim 16, further comprising a response caching system for caching information derived from the response on the server.

22. (Original) The system of claim 16, wherein the final set of OSGi bundles includes OSGi bundles that are identified from a repository accessed by the server.

23. (Original) The system of claim 16, further comprising:

an analysis system for determining whether the client has the prerequisites, wherein any prerequisites that the client device does not have are identified as the resource limitations; and
a response system for sending the response from the client device to the server.

24. (Previously Presented) The system of claim 16, wherein the system uses SyncML DM protocol for communication between the client device and the server.

25. (Currently Amended) A program product stored on a recordable medium and executed by a computer for resolving prerequisites for clients devices in an Open Service Gateway Initiative (OSGi) framework, comprising:

program code for determining, on a server, prerequisites for an OSGi bundle to be loaded on a client device, the prerequisites comprising a set of all OSGi bundles that are necessary for utilizing the OSGi bundle;

program code for communicating, prior to communicating any of the OSGi bundles to the client device, a list of the prerequisites from the server to the client device, and for receiving a response from the client device, wherein the response identifies any resource limitations of the client device determined by the client device based on a comparison of the list of the

prerequisites and current OSGi package and service interface resources of the client device, the resource limitations comprising all prerequisites of the list of the prerequisites that are not currently present on the client device;

program code for automatically recursively resolving, upon determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and service interface resources than the current OSGi package and service interface resources of the client device, the prerequisites by identifying a final set of OSGi bundles on the server that fulfills the prerequisites within the resource limitations of the client device; and

program code for substituting, upon determining that the list of the prerequisites that are not currently present on the client device would require more client device OSGi package and service interface resources than the current OSGi package and service interface resources of the client device, at least one other OSGi bundle that operates within the resource limitations of the client device for one of the OSGi bundles and one of the prerequisites of the list of the prerequisites that are not currently present on the client device.

26. (Cancelled)

27. (Original) The program product of claim 25, further comprising program code for loading the final set of OSGi bundles on the client device if the prerequisites are completely resolved.

28. (Original) The program product of claim 27, wherein the program code for loading comprises program code for instructing the client device to load the final set of OSGi bundles in a particular order.

29. (Previously Presented) The program product of claim 25, wherein the prerequisites comprise at least one item selected from a group consisting of a service, a package and a computer resource needed by client device.

30. (Previously Presented) The program product of claim 25, further comprising program code for caching the information derived from the response on the server.

31. (Previously Presented) The program product of claim 25, wherein the final set of OSGi bundles includes OSGi bundles that are identified from a repository accessed by the server.

32. (Original) The program product of claim 25, further comprising:
program code for determining whether the client has the prerequisites, wherein any prerequisites that the client device does not have are identified as the resource limitations; and
program code for sending the response from the client device to the server.